

Claves

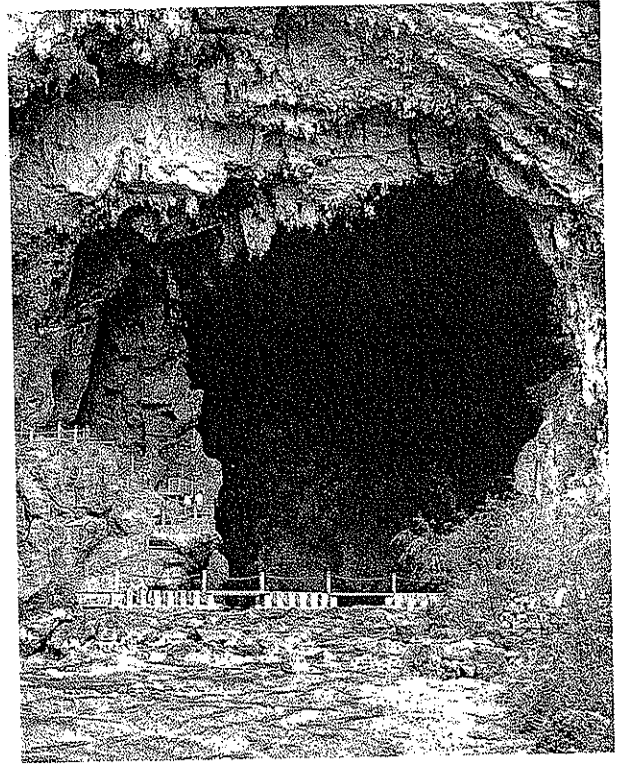


Neil Morris

WHAT IS A CAVE?

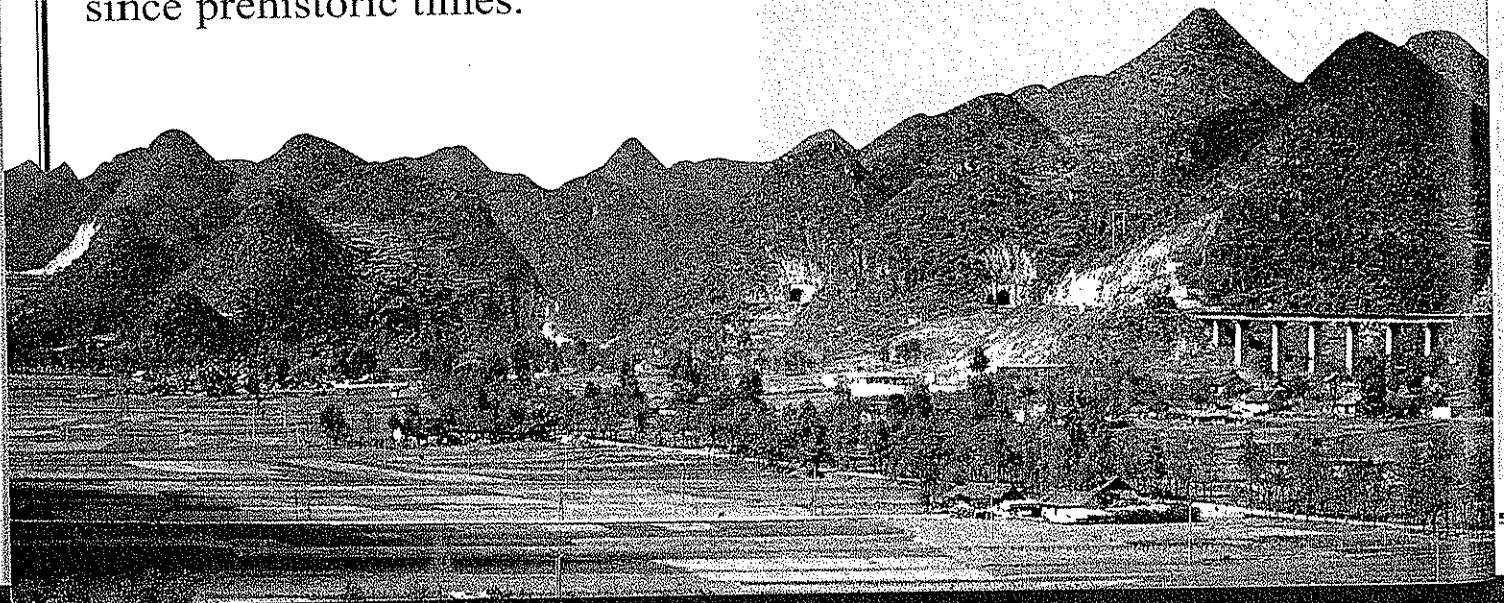
A CAVE is a hollow in the ground. This hollow, which we sometimes call a cavern, is really a hole in the earth's crust. Some caves are just below the surface, while others extend deep down into the crust.

Caves can have very long underground passages, with lakes, rivers, and waterfalls. Some caves may be up to 50 million years old. Most developed as water trickled through them, finding paths between layers of rock, filling tunnels, and carving out new passages. Experts have found evidence showing that people and animals have lived in caves since prehistoric times.



BENEATH THE HILLS

An underground world of caves lies beneath the unusual limestone cones and towers of the Shuicheng hills in China.



CAVE ENTRANCE

THE entrance to this big cave in Anshun, China, is huge and easily seen. Sometimes, however, the only evidence of a cave might be a small hole or crack in the ground. Some of the world's most famous caves have been discovered by accident.



INSIDE A CAVE

Constantly dripping water creates fantastic shapes and patterns inside caves, where it is damp, dark, and cold. Amazing sights usually await explorers when they first enter a cave. There are no green plants inside because there is little or no light to help them grow. There are, however, fungi, bacteria, and many other forms of life.

HUGE CAVERNS

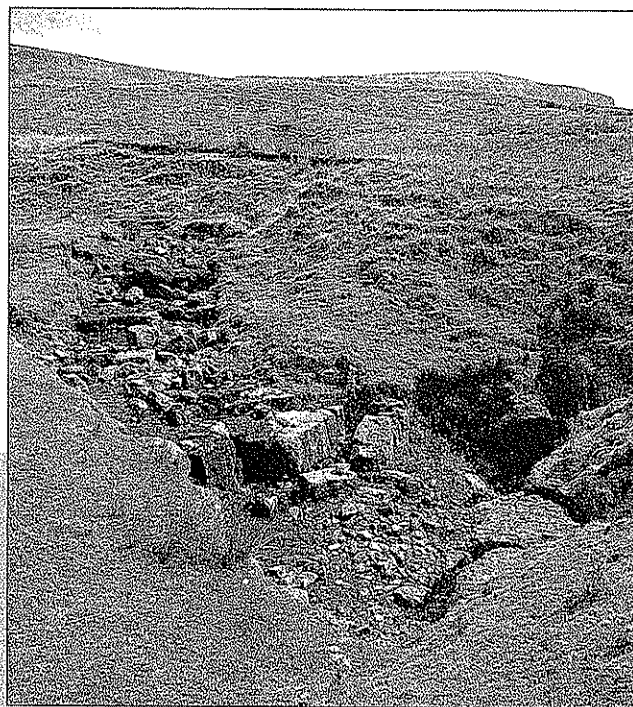
SOME CAVES are huge. The main chamber of the famous Carlsbad Caverns in New Mexico is over 1 kilometer (0.6 miles) long and lies over 300 meters (1000 feet) under the ground. This enormous cavern has a ceiling that is as high as a skyscraper in some places. A cowboy discovered the caverns in 1901, when he saw a black cloud rising from a hole in the ground. The cloud was actually a swarm of bats, and the hole was the entrance to a maze of caves.



LIMESTONE AND WATER

THE WORLD'S biggest caves are found in limestone areas. Limestone is a soft rock that dissolves in weak acid. Rainwater contains the acid that eats away at limestone. Over thousands of years, the weak acid nibbles away until thin cracks in the rock grow into bigger holes and then become wide tunnels. *Read above: acid, rain*

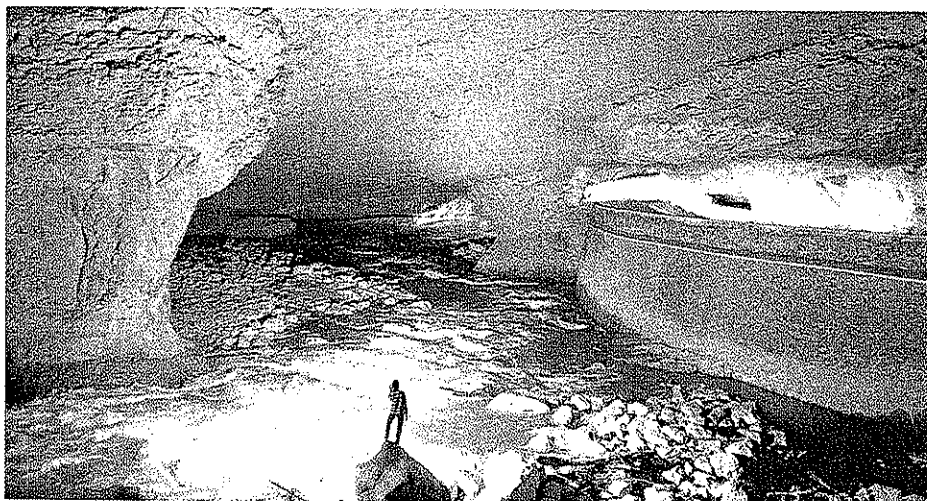
Deep under the ground, the water finally reaches a level called the water table. Here the rock is already full of water and cannot hold any more.



SINKHOLE

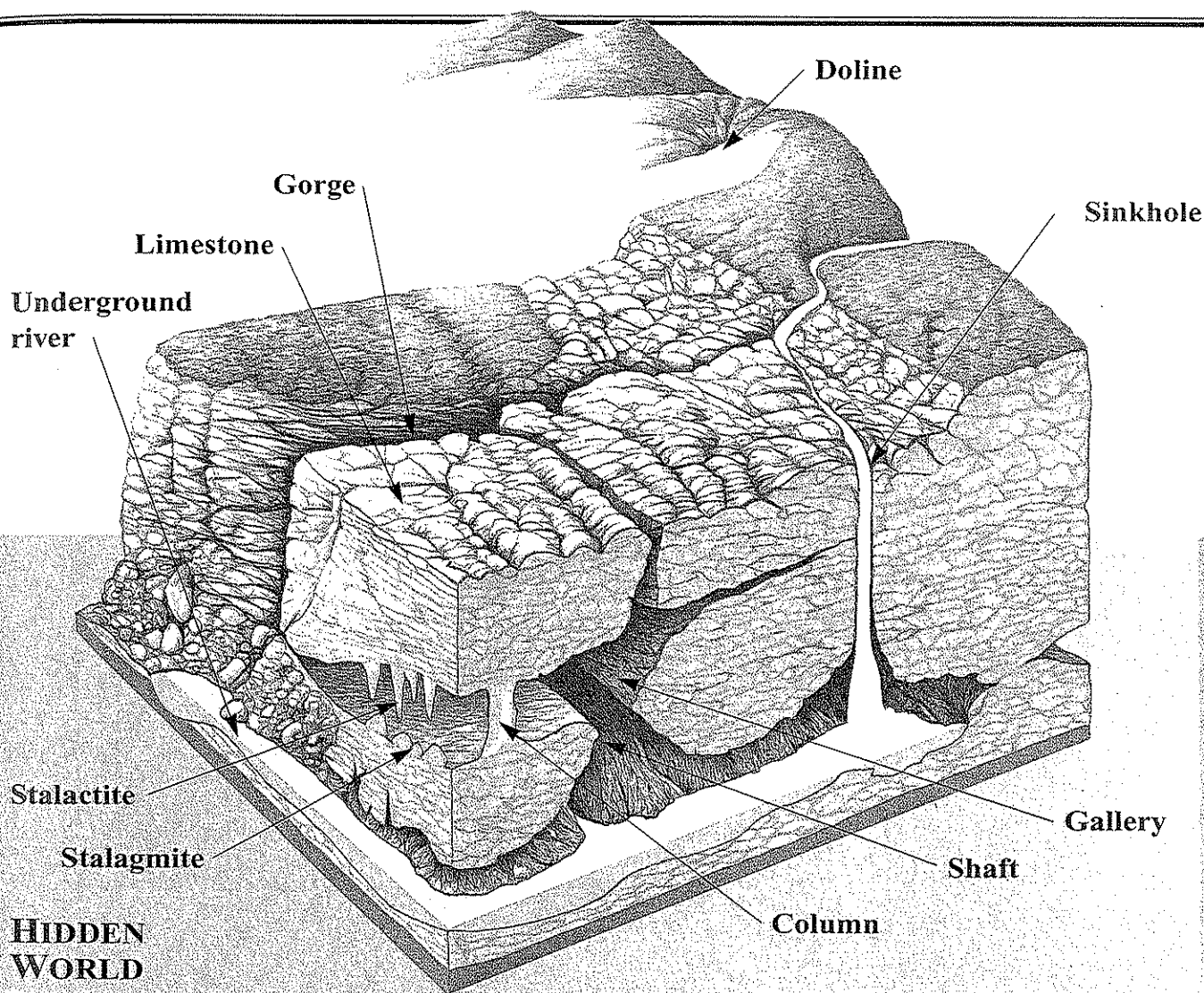
Sinkholes are funnel-shaped holes through which water flows into a cave. They usually start as large cracks.

Read below: the water table, a cavern



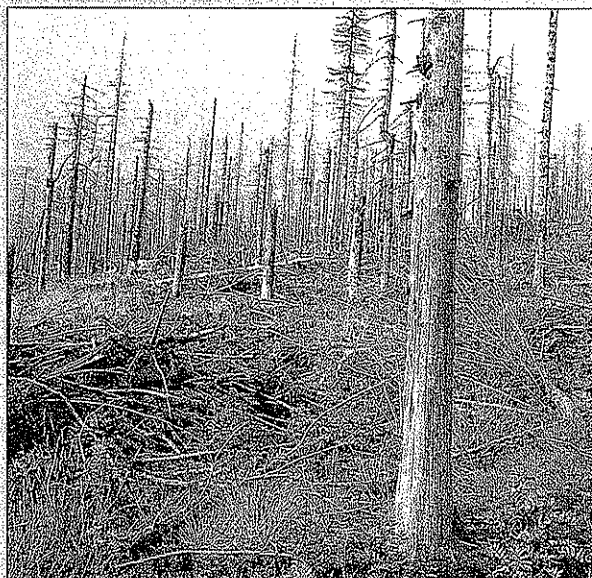
UNDERGROUND RIVER

AS water pours down through the ground, it carves passages from the rock. Water flows through the passages as underground rivers.



HIDDEN WORLD

This cross section shows what limestone caves look like underground. A stream vanishes down a sinkhole, making shafts and galleries. A small doline or large gorge may form when caves collapse.



ACID RAIN

In some areas, acid rain speeds up the formation of caves, as the acidic water widens cracks. Acid rain is a form of pollution caused by gases given off by power plants and factories. Trees and whole forests can be killed by acid rain.

CAVE FORMATIONS

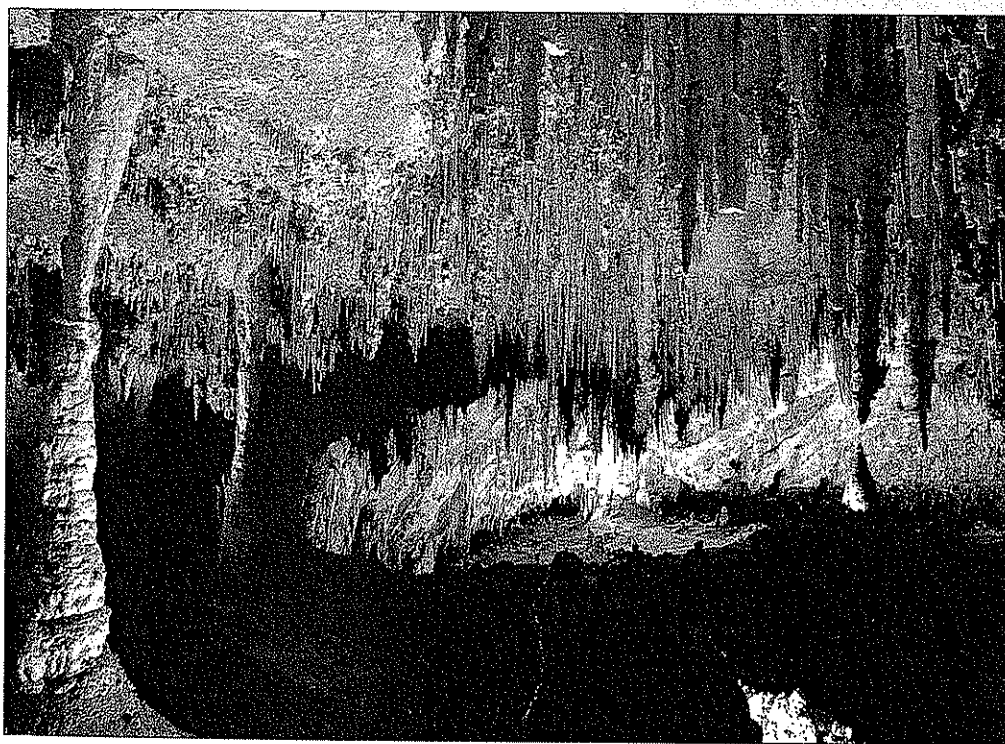
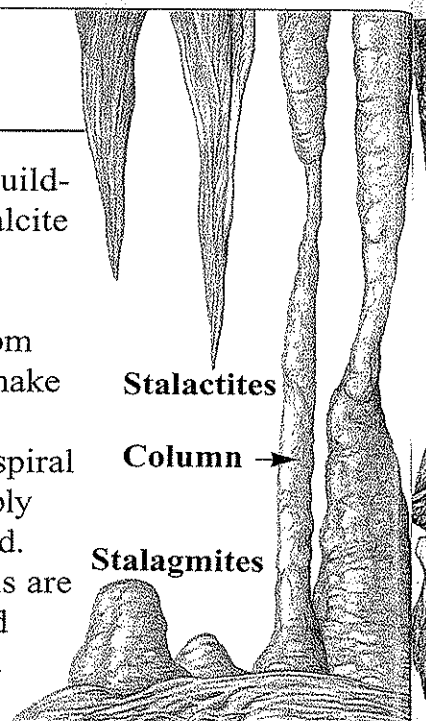
WHEN WATER seeps through limestone, it carries a dissolved mineral called calcite. Over time, this mineral is deposited and creates formations called speleothems.

The best-known speleothems are stalactites, which hang downwards, and stalagmites, which grow upwards. To remember which is which, think “c” is for ceiling in stalactite, and “g” is for ground in stalagmite.

STRANGE SHAPES

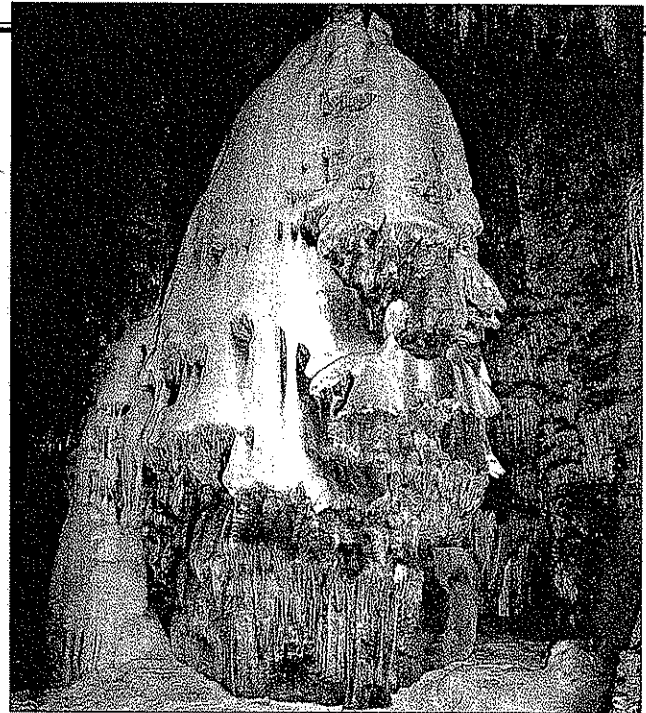
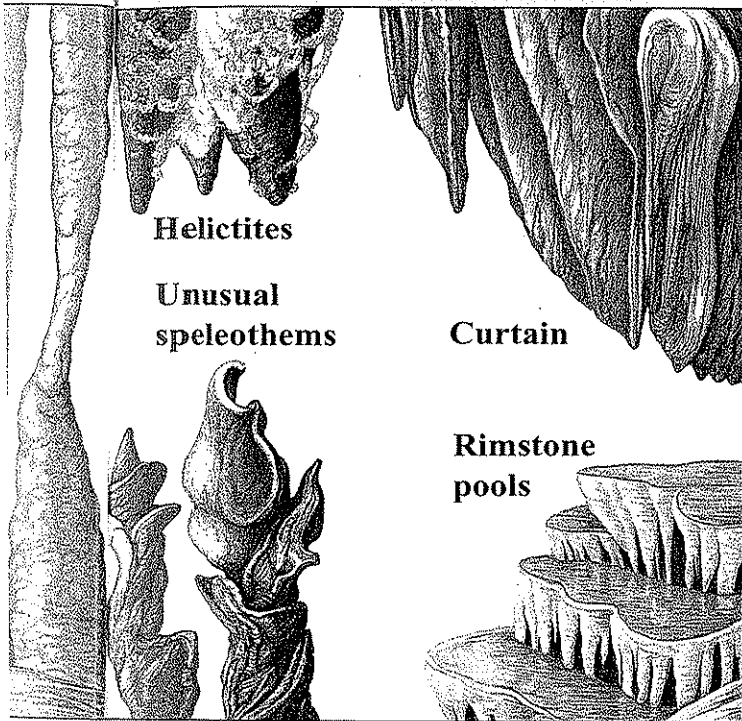
A gradual build-up of calcite makes strange shapes. Water drips down from stalactites to make stalagmites.

Helictites are spiral shapes, probably caused by wind. Rimstone pools are calcite-rimmed pools of water.



CAVE DECORATIONS

Dripping water creates beautiful decorations. As it trickles from cracks in the cave ceiling, the water covers cave walls with flowstone and makes dripstone curtains. The Carlsbad Caverns, in New Mexico, contain huge stalactites and other rock formations.

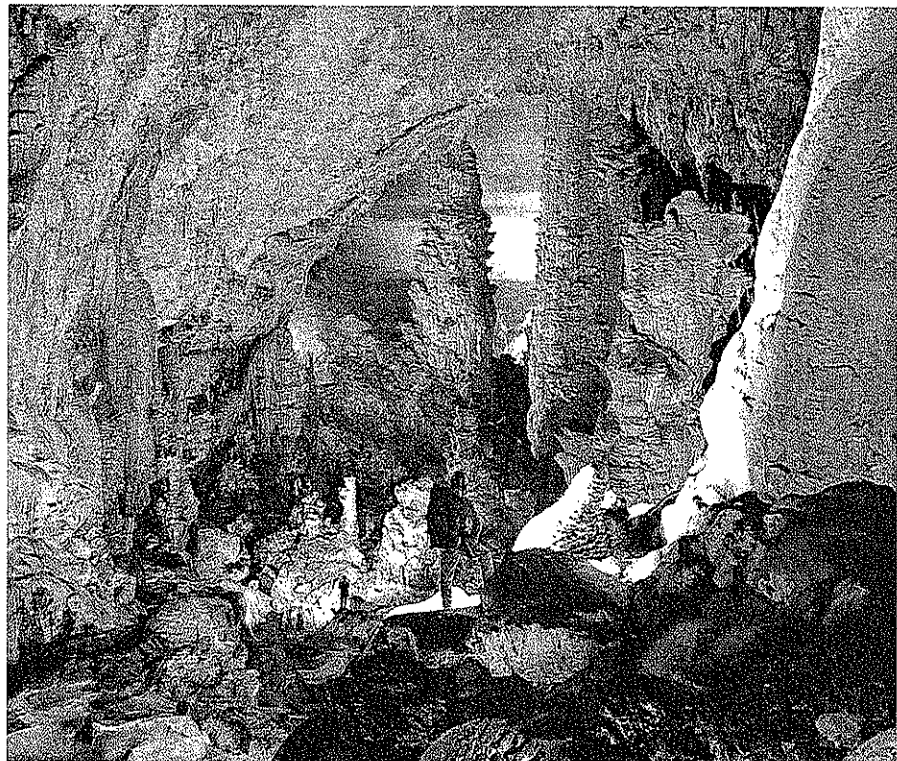


CHRISTMAS TREE

This amazing stalagmite in the Carlsbad Caverns, known as the "Christmas Tree," is 20 meters (65 feet) high.

COLUMNS

STALACTITES and stalagmites can grow together to form a column. These columns are from a cave in China. The world's tallest column, also in China, is 39 meters (128 feet) high! The tallest stalagmite is 32 meters (105 feet) high, and the longest stalactite is over 6 meters (20 feet) in length.



VOLCANIC CAVES

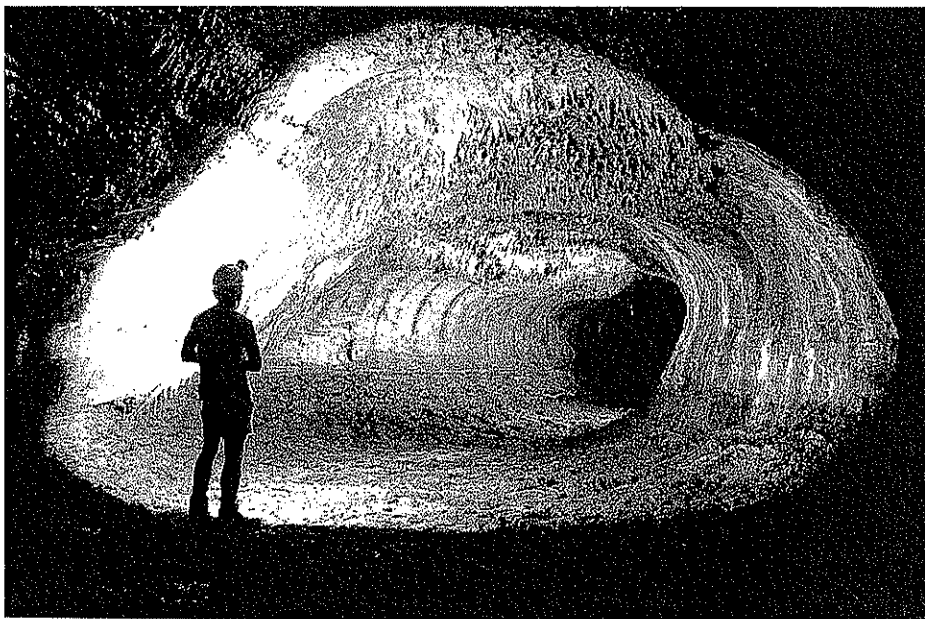
WHEN a volcano erupts, hot molten rock, called lava, is thrown out and flows on the earth's surface. Sometimes, when a river of lava cools and hardens quickly on the outside, the lava inside remains hot and liquid, and flows on. Eventually the lava drains away, leaving a solid, hollow tube.

These volcanic caves, called lava tubes, can easily collapse. Their roof is usually thin, and earthquakes are common in volcanic areas. Lava tubes very rarely last long.



LAVA RIVER

Some volcanoes release streams of lava. These flow as a red-hot river, like this one on Mount Etna, Italy. The surface of the river can cool quickly from contact with cold air and form a hard crust.



KAZIMURA CAVE

THERE are hundreds of volcanic caves in the Hawaiian Islands. Kazimura Cave travels through the earth for more than 11 kilometers (7 miles), making it one of the world's longest lava tubes.



ACTIVE LAVA TUBE

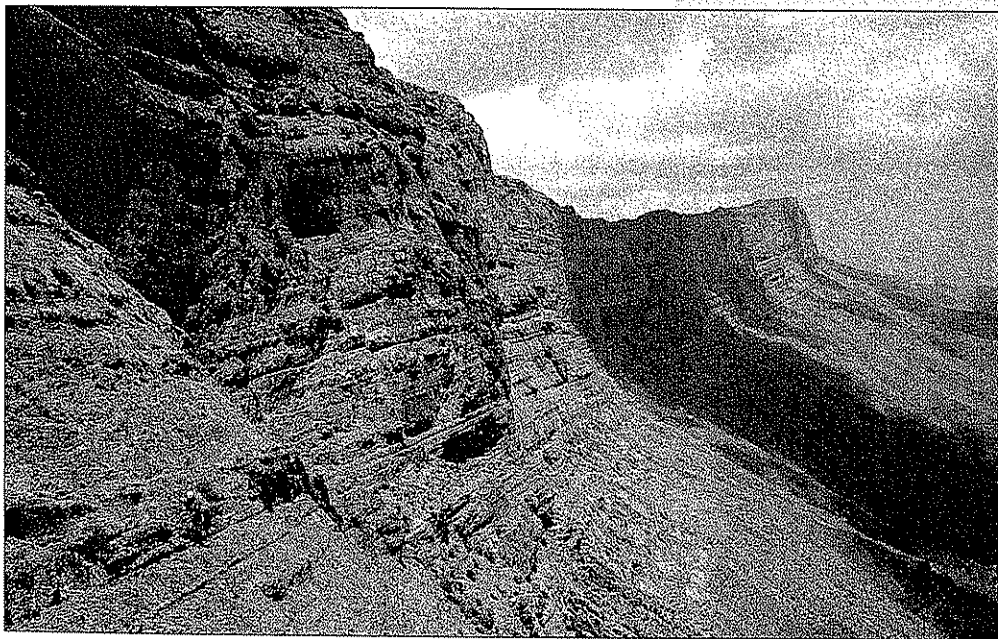
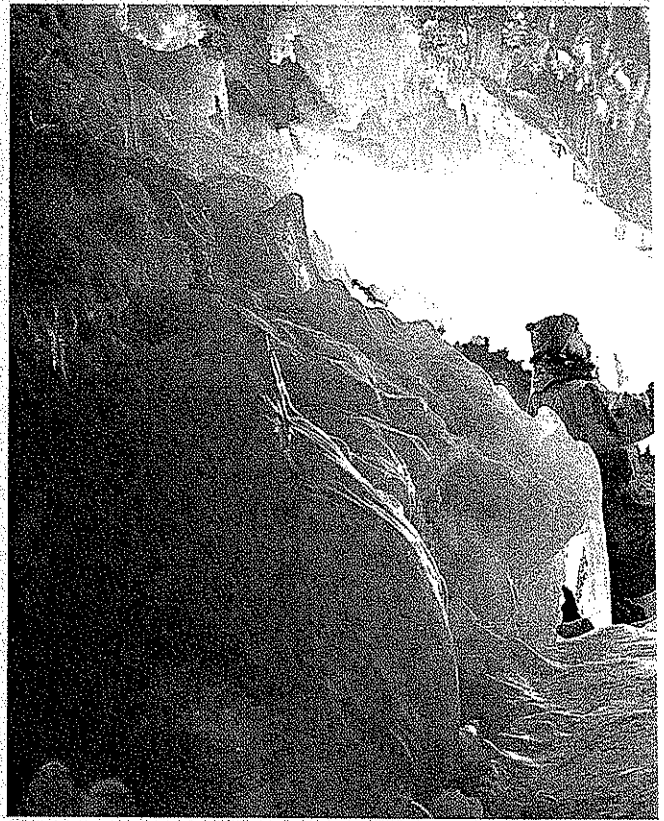
Lava tubes generally have regular shapes with smooth sides. They are usually near the surface, often only about 1 meter (3 feet) under the ground.

These tubes may have many openings in their thin roofs. Stalactites of lava may hang from the ceiling, and the floor may be covered with ripple marks left by the fiery river that created the cave.

ICE CAVES

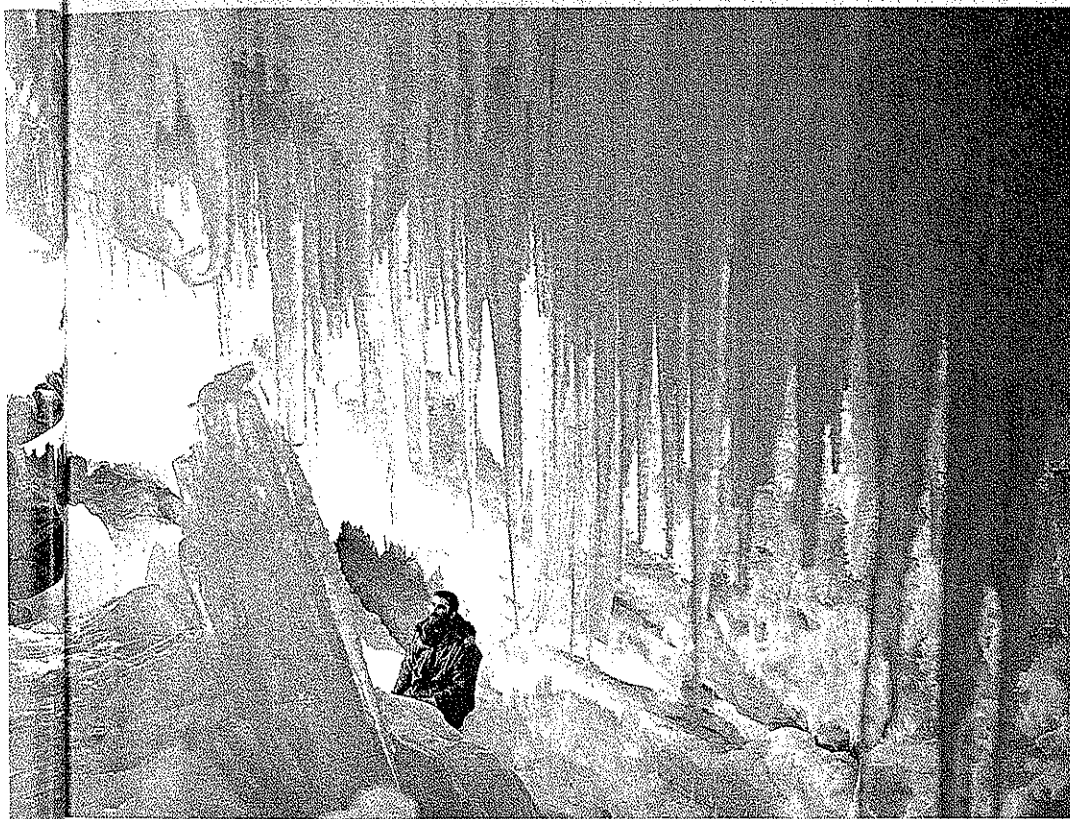
CAVES CAN form inside glaciers, icebergs, and ice sheets. As a glacier moves slowly toward warmer areas of land, its ice starts to melt. The water which flows under the ice hollows out a cave. These ice caves constantly change their shape and size, and seldom last long.

An ice cave is also formed when meltwater drips into a rock cave and freezes because the cave temperature is very cold. Such caves are filled with amazing ice formations.



DESERT CAVES

There are many deep caves in the mountains of central Asia (left). Although this is desert country, many of these caves are blocked with ice. Some caves in the hot deserts of Arizona and New Mexico are also filled with ice.



ANTARCTIC ICE CAVES

This ice cave is on Ross Island, at the edge of the Ross Ice Shelf, a huge mass of permanent ice in Antarctica. The island is dominated by Mount Erebus, the most southern active volcano in the world. The large cave in this picture has walls of ice, with many long icicles hanging down like stalactites.

ICE GIANTS

EISRIESEN-WELT, the “world of the ice giants,” is a cave system high in the Austrian Alps. It formed over two million years ago when water seeped into the caves and froze into eerie shapes.

